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Practical Strategies for a Successful Intranet

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14. ABSTRACT

SPAWAR Systems Center Pacific (SSC Pacific) established its intranet in 1996. It was one of the first organizations to see the value of an organizationally bounded Internet that could leverage the newly developed browser technology?the term ?intranet? had not even been coined when it was implemented at SSC Pacific. From its inception until October 2009 (13 years), SSC Pacific continuously employed a small group to develop, update and maintain the Center?s intranet information architecture and its implementation. This paper documents the knowledge obtained by the SSC Pacific intranet group that was responsible for developing and implementing the continuous improvements reflected in the SSC Pacific intranet. Much of this knowledge was gained through the day-to-day experience of updating and maintaining the intranet. Constant dialog with end-users (customer feedback) supported and prioritized development and updated initiatives, and was integral to understanding customer needs. Knowledge was also realized through conscientious research into the latest industry best practices, and by studying other organizations? intranets. This paper attempts to capture the knowledge learned by this group in one of 10 strategies, or as a subset of a particular strategy.

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ADMINISTRATIVE INFORMATION

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BACKGROUND

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This paper documents the knowledge obtained by the SSC Pacific intranet group that was responsible for developing and implementing the continuous improvements reflected in the SSC Pacific intranet. Much of this knowledge was gained through the day-to-day experience of updating and maintaining the intranet. Constant dialog with end-users (customer feedback) supported and prioritized development and updated initiatives, and was integral to understanding customer needs. Knowledge was also realized through conscientious research into the latest industry best practices, and by studying other organizations' intranets. This paper attempts to capture the knowledge learned by this group in one of 10 strategies, or as a subset of a particular strategy.

INTRODUCTION

There is an underlying assumption about an organization that employs an intranet: an intranet is important and valuable to the organization. The organization must believe that its employees obtain important corporate knowledge—information about the organization, its organizational processes, applications, functions, employees, documentation, etc., from the intranet—or it could not justify the investment. Another basic assumption is that an intranet is employed as a top-down, bottom-up, and peer-to-peer communication tool throughout the organization.

Conceptually, an intranet is about capabilities, information and knowledge sharing, rather than the tools or the information technology (IT) infrastructure used to support it. Intranets can be implemented on many different IT infrastructures, using many different supporting tools. For this reason, this paper focuses on intranet capabilities rather than the tool composition used to deliver an intranet. The discussion of tools only becomes useful in the context of capitalizing on the knowledge gained by employees through their own Internet usage experiences. This knowledge can be leveraged to obviate the need for training and create a common knowledge base.

While there are many properties that are similar between an intranet and the Internet, there are several distinct and important differences between the two. The primary difference is that to implement an effective intranet requires more structure and standardization than is necessary or even feasible on the Internet. This paper will attempt to highlight these differences in the context of the lesson learned and contextually clarify why structure and standards are vital for an intranet.

STRATEGIES

Ten strategies for creating and maintaining a successful intranet are presented in the following sections. The narrative objective for each strategy is to clearly articulate its context and value. Each will include a discussion on why it is important, identify alternatives and consequences, and articulate effective methods of implementation. Recognizing that under most circumstances an

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organization does not discard its intranet and design a new one from scratch, the strategies are intended to provide a roadmap for moving to a more efficient and effective intranet.

The 10 strategies are as follows:

1. Management and IT Support are Required
2. Change Management is Important
3. Develop an Information Architecture
4. Data Collection is Best Accomplished Through a Process
5. Make it Easy to Find Information
6. Use a Centralized Data Repository
7. Use a Consistent "Look and Feel"
8. Use a Site Naming Convention
9. Use Configurable Content Management
10. It is *Not* About the Tool

1: MANAGEMENT AND IT SUPPORT ARE REQUIRED

The success of an intranet correlates directly to the level of support provided by senior management. An intranet is one component of a knowledge management program and essential to a successful knowledge management environment. Implementing knowledge management in an organization is a "change management project." A successful change management effort is always characterized through the strong support and leadership of the organization's senior management. Only the top-level leadership can set the example across the organization and make decisions that promote the resourcing and visibility of the intranet to incentivize the sharing of information and knowledge among its employees.

The success of an intranet can also be determined by the level of support provided by the IT department. The capabilities available on the IT infrastructure provide the foundation and the functional limitations for the implementation of an intranet. Whenever possible, the intranet functional requirements need to drive the selection and configuration of intranet tools by the IT group. IT can also assist by acquiring new capability and version updates and providing insight into new technologies as they emerge. Partnering with IT is a key ingredient for a viable intranet and is essential in a rapidly changing technology environment.

2: CHANGE MANAGEMENT IS IMPORTANT

For the organization's intranet to be a useful top-down, bottom-up, and peer-to-peer information/knowledge sharing and communications tool, it must be the source of general information for everyone. Since most organizational communication is email-centric, a consideration of how to appropriately move the culture to using an intranet is important. Email is a valuable tool; however, there are functions that are more efficiently accomplished using an intranet. Moving the culture to one that uses the intranet effectively and leverages its efficiencies requires change management. Recognizing that change management is important leads to a consideration of how to change behavior so that the intranet will become more useful to all. For example, if the desire is to store important organizational briefs on the intranet (there are important reasons to do this—not the least of which is configuration control), having senior leadership and management direct that briefings be presented from the intranet will lead to the desired behavior of briefs being stored on the intranet.

Not all change management is directive. Some organizational behavior changes can be accomplished by recognizing and using inherent characteristics of human behavior to channel individual activity to benefit the organization. An example is leveraging the desire for individual recognition: most employees who publish are proud of their publishing accomplishments. If an employee could link their publications to their directory entry so everyone could view their list of publications, access their papers, or search their publications, most employees would voluntarily provide their publications (provided it isn't hard or time consuming to accomplish the upload). The organization would rapidly get an unfettered and very close to complete view of the actual research being accomplished. Add meta-data pull-down menus into the upload process and the organization now has easily obtainable and sortable data about its burgeoning intellectual property. Thus, changing behavior to acquire valuable information held by individual employees can sometimes be accomplished by capitalizing on nearly universally inherent motivations; it may not always require management directive.

3: DEVELOP AN INFORMATION ARCHITECTURE

An intranet needs to have a plan and a focus or it will expand haphazardly and become very difficult to manage and navigate. Creating intranet sites and managing the information utilizes organizational resources. The ease of finding information can also impact organizational resources; positively, the user finds what they are looking for quickly and is able to act on the information or, negatively, the user spends a lot of time searching, with marginal results. Thus, the organization has a vested interest in an intranet that is easy to maintain and manage with information that is useful and easy for its employees to find. Creating an information architecture will help the organization to successfully minimize the resources required to manage and use the intranet. The information architecture is a roadmap for adding sites and for utilizing information for multiple purposes. For example, adding a site will invoke procedures that include criteria established during the development of the information architecture that dictates the type of site, the authoritative nature of the site's information, the need to add the site to the search or site index as appropriate, the format required to provide or access specific information from other sources, meta-data requirements, etc.

The information architecture defines various attributes that support the ability to associate data. For example, a publication found during a search needs to link to the author(s); the authors are linked to their directory entries, their level of expertise in the subject area in question, the project they are working on, etc. This may require a few "clicks" but should not require multiple searches. Setting these associations up in the information architecture will limit the amount of re-work that would otherwise be required if the associations were made after the development of the intranet.

4: DATA COLLECTION IS BEST ACCOMPLISHED THROUGH A PROCESS

Asking employees to enter data purely to collect data is usually met with no response. For example, only about 30 percent or less will respond to an on-line survey. A data set that is valuable to the organization requires close to 100-percent participation. Employees are not intentionally unresponsive; providing data takes time and requires an individual to remember to act on the email request when there is time available. Thus, it is impossible to successfully collect the required information from a significant part of the organization's population without an extraordinary effort requiring management tracking. An alternative is to collect the required information as part of a process that the individual needs to do in order to accomplish a required task.

If information is desired from employees, a solution is to have the employee enter that information as part of a process that the employee is required to do or imbedded in a process that is part of the employee performing work. For example, the requirement to document an employee's skills can be part of a process. All employees have reviews with their supervisor. Skills and improvement of skills is generally a part of that discussion. Providing a venue to facilitate that discussion as part of the review process could allow the individual's skill information to be collected and verified by the supervisor while facilitating communications between the supervisor and the employee that leads to improved employee skills.

A second example may be the capture of intellectual property (e.g., publication submission) during an approval process. Improving the employee experience by automating an approval process can enhance the organization's ability to capture data while resulting in increased employee efficiency. The requirement for management approval and assessment of the release level of publications is an opportunity to acquire the publication and increase the organizational knowledge base. The lesson is to collect important data whenever possible as part of an employee's work process.

5: MAKE IT EASY TO FIND INFORMATION

Several pathways to information are useful in making the information more "findable" by the average user. People think of and look for information differently depending on their past experiences, personal preferences, and understanding. For example, some may search for "personnel" while others search for "human resources" or "HR." Still others may not know what to search for and prefer to browse a list of the organization's sites where they can find "official" organizational information.

When browsing, users prefer to see information organized alphabetically and/or by category to make their visual search more productive. It would be impossible to organize the Internet; however, it is reasonable to effectively organize an intranet by providing an index of authoritative sites and organizational applications listed alphabetically and by category. Not all intranet sites can or should be included on the index. Criteria can be established for determining whether a site would be listed in the index; one criterion may be whether the site or application is needed by most of the employees in the organization or is only needed by a small subset of employees. It is not always obvious that a function is part of a larger function; thus, another criterion may be to include important sub-functions to make them easier to find. For example, a user may not know that Defense Acquisition Workforce Improvement Act (DAWIA) is part of training. In this example, the user should find DAWIA in a search and also find it listed in the index under "D"; however, the DAWIA information is part of the training site. Selecting DAWIA in the search results will bring up DAWIA information in the context of the training site. Implementing an index within a database is useful for simplifying maintenance. Since sites may be referred to using multiple key words, it is most efficient to maintain only one URL with multiple key word references. Maintaining an intranet page list is time consuming and can lead to errors when changing a URL in multiple locations within the page. Maintaining the link in one location and referring to it in multiple ways (human resources, HR, etc.) is easier, and maintenance errors are less likely to be made.

A search engine is useful but has limitations when used in an intranet environment. As mentioned, one cannot browse using a search engine. For example, although algorithms such as those employed by Google work well on the Internet this may not translate to success on an intranet. On the Internet, Google can make use of cross-linking algorithms that add "weight" to the authority of a particular site (i.e., the more sites that link to another site the more authority it has). This is

not necessarily true in an intranet environment where there is not the same level of cross-linking, so it is hard to establish the "authority" of a given site. Therefore, the search results are weighted equally, and thus not always useful. Using Google's keyword match capability is limited since it requires ongoing manual monitoring of searches and maintenance to update the keywords and URLs as the intranet changes and users progress in their search requests.

That being said, having a search engine on an intranet is essential. However, to make it more effective and useful requires that the structure of the intranet support focused searches. For example, a user may want to limit their search to authoritative sites and exclude blog posts.

6: USE A CENTRALIZED DATA REPOSITORY

Collections of similar items are usually present on an intranet. These collections must be maintained in a centralized data repository. Some examples of collections are: forms, instructions, policies, how do I's, patents, and publications.

Creating these repositories is an important factor for the ease of maintenance and standardization; content owners need only to go to one location to maintain their content. Content maintained by several content owners has the same look and feel. Distributed maintenance or maintenance by the content owners of these repositories is desirable; it is often the case that a single organization is responsible for the function, but the content is distributed across several organizations. By having the same look and feel, the repositories become recognizable as an authoritative site for official information or data belonging to the whole organization. And, since the collection is contained within a single site, the repository is easily searchable and browsed by a user who may not know the correct key words to perform a search or may just want to view what is available.

The centrally managed repository provides continuity of URLs that can be referenced by other sites. Since the site is recognized as authoritative and always in the same location (same URLs), sites that link to individual items contained in the repository are assured of having accurate and the most recent information—they imbue some expectation of version control.

7: USE A CONSISTENT "LOOK AND FEEL"

Unlike the Internet, an organization controls and manages the intranet and can take advantage of standardization to help users more quickly find information. Companies with Internet sites have learned that a professional-looking organized site with clear navigation will keep their audience from "moving on" to the next site for their needs. Intranets can go even further. With a consistent "look and feel," organizations can create an environment that users come to understand, expect, and anticipate, which will lead to a more satisfying, efficient, and repeatable user experience.

A consistent "look and feel" provides the user with a known experience that allows him/her to quickly navigate sites to find information and to take action based on that information. Visiting several sites that require a user to "figure out" the site organization and navigation is a frustrating experience. Intranet sites need to look the same, have a similar organization of information, and have similar navigation to the information contained within the site. This requires a small set of standardized sites that are configured for very similar purposes, such as an information site, a meeting site, a file sharing site, etc. (note that these different types of sites need not have the same underlying IT tool).

Distribution of content maintenance to the content owners is desirable; however, the format of the site needs to be dictated by the organization. The content owner should be concerned with the type of site and what they are communicating vice the tailoring of the site to "look" like their

organization; there is only one intranet and only one organization that the intranet services. All sites need to be "recognizable" by the user so that the organization and location of information within the site is part of the user's meta-knowledge or "known" by the user.

8: USE A SITE NAMING CONVENTION

Having a naming convention for all sites on the intranet helps users find information. Sites need to be named whenever possible to match the function of the site so that when searching the intranet or viewing the index the site is easily recognizable. Site names need to be spelled out and contain the acronym if that is how the function is known to give the user more opportunities to discover the site. For example, don't put articles at the beginning of site names ("A," "The," etc.) as it is difficult for the user to look up the site in an alphabetical listing. Don't put the name of your organization in the beginning of your site name for the same reason (e.g., don't name every site SSC Pacific "something"). The intranet needs appropriate guidance to help users name their sites in order to make them easier to find.

The naming of URLs can also add to the functionality of the intranet. Regardless of the underlying software or tool, sites that have specific functions need to be in similar domains so they can be readily searched. For example, if the user wants opinion or conversation regarding a topic, they may want to focus their search by limiting the search to blogs. However, if the user wants authoritative information, they may want to exclude the blogs from their search. Note that this has nothing to do with the underlying software of the authoritative or blog sites; it has everything to do with the URL naming convention that allows users to do a more focused search.

9: USE CONFIGURABLE CONTENT MANAGEMENT

Intranet sites need to have configurable content management and an underlying database system. Much of the information on an intranet can be used by several different information consumers. For example, the publications group may have the organization's publications on a web site to facilitate the gathering of publications metrics such as number and type of publications. A different vector for this information is to link it to the people directory so that an individual's entire list of publications can be viewed to provide insight into that person's knowledge base and professional interests. Locating the publications in one physical location is advantageous to those who maintain the set of publications. If that single physical location is a database, it can be stored once, maintained by the content owner (in this case, the publications group) and a different view can be created depending on the use of the information (in this case, the corporate directory). Thus, all users of the publications can be assured of obtaining a publication from *the* authoritative source that is maintained by the content owner.

To accomplish the goal of storing information and making it available to several consumers requires the ability to structure the content and to provide a standardized interface to the content owner for maintenance. "Content management processes" are designed to (definition from Wikipedia):

1. Allow a large number of people to contribute to and share stored data
2. Control access to data based on user roles (defining which information users or user groups can view, edit, publish, etc.)
3. Provide easier storage and retrieval of data
4. Reduce duplicate input
5. Improve communication between users

Adding the ability to configure the content management or configure the processes around user requirements provides more flexibility to the content managers and more availability of the desired corporate information. In this case, one size does not fit all. Different users may have different content requirements; however, generally there are a small number of categories for selection that can be maintained for use by content owners to meet their needs.

10: IT IS *NOT* ABOUT THE TOOL

It is more important to leverage off of the underlying knowledge of the user than to identify the software or tool that is being used for a specific function, especially if it differs from the accepted use. For example, wikis are prevalent on the Internet as a dynamic site that users can contribute their knowledge to and/or learn from the knowledge of others. These sites are generally text with some diagrams, pictures, videos or other supporting information to help convey knowledge or information to the reader. However, wiki software can be used for other purposes such as file sharing. If a wiki application is functionally being used for file sharing, then call the site(s) "file sharing" for functional clarity, rather than "wiki" regardless of the underlying software application. This leaves room for the more conventional use of the term "wiki" that meets the expectation of the user based on their Internet experiences. The point is: A user is confused by a "wiki" site whose purpose is actually to share files.

The understanding of common technical terminology that most users have obtained via other venues can be leveraged. A user comes to an intranet with a level of knowledge and understanding that can quickly allow them to productively use the intranet; it is advantageous to provide an environment that leverages their familiarity with concepts and terms that are consistent with what they already know. Ultimately, the goal is to provide such a familiar environment that no training is required. There are now many example sites on the Internet that lead a user through complex processes without any training simply by leveraging the user's resident knowledge. An example is the use of the "shopping cart," when purchasing items on an Internet site; it leverages the ubiquitous understanding gained from the grocery shopping experience.

CONCLUSION

There was very little discussion in this paper about the type of content that would be useful to include on an intranet, the page styles, metrics or the components of the intranet architecture. The strategies apply to all intranets regardless of the IT infrastructure, the underlying applications or tools, or the size of the intranet. The purpose is to articulate the strategies that were learned over several years of experience so that they do not have to be repeatedly rediscovered in the future.

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